

In a method aspect of the present invention, there is provided a method for making a titanium semiconductor bridge igniter, which method includes depositing a layer of semiconductor material and an exposed layer of titanium thereon onto a substrate in a bridge formation, forming electrical contact pads at opposite ends of the bridge formation, and preconditioning the titanium semiconductor bridge igniter by heating it to an elevated temperature to stabilize it against temperature-induced variations in bridge electrical resistance, for example, a method in which the igniter is heated to an elevated temperature of from about 37°C to about 250°C, e.g., from about 100°C to 250°C.

In The Claims

Please amend claims 1 and 12 to read as follows.

1. (Twice amended) A semiconductor bridge igniter comprising:  
a substrate;

an electrical bridge structure disposed on the substrate, the bridge structure comprising a layer of a semiconductor material having a negative coefficient of electrical conductivity at temperatures above ambient temperature and having disposed thereover a layer consisting essentially of titanium, the bridge structure comprising a bridge section extending between and connecting spaced-apart pad sections, each pad section being of larger area than the bridge section; and

a pair of electrically conductive lands each overlying a respective one of the pad sections and being spaced apart from each other to leave the bridge section exposed.

12. (Twice amended) A semiconductor bridge igniter comprising:  
a substrate;

an electrical bridge structure disposed on the substrate and electrically insulated therefrom, the bridge structure comprising a layer of a semiconductor material having a negative coefficient of electrical conductivity at temperatures above ambient temperature and having disposed thereover a layer of titanium, the bridge structure comprising a bridge section extending between and connecting spaced-apart pad sections, each pad section being of larger area than the bridge section; and

a pair of electrically conductive lands each overlying a respective one of the pad sections and being spaced apart from each other to leave the bridge section exposed, made by